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Remedy for the Yellow Fever.

A correspondent of the New York *Herald* sends the editor the following:

"A few years ago I fell in company with a very intelligent captain of a merchant ship who had made many voyages to the West Indies, and also to the coast of Africa, and he informed me that as an antidote to the fevers prevailing in these climates, he always took with him a large bottle of pulverized charcoal, of which he gave his crew a teaspoonful three times a day, in a glass of water, and he never lost a man by the yellow fever, though other ships were daily losing their men. Should any one have faith to try this, with good effects, I hope it may be published to the world"

[As the yellow fever has lately appeared in a few localities in this country, the above will be interesting. We have little faith, however in its utility.]

The Inventor and his Fly Trap.

The following good story is told by the New Haven *Register*: "Bishop went down to New York with one of his patent fly trap machines, which makes the fly catch himself by a revolving cylinder. A butcher was very desirous he should set it agoing in his shop, and in the course of half an hour something less than a peck of flies had been 'hived.' The butcher was pleased, but concluded, as his flies were 'all trapped,' he 'didn't want the machine.' 'Very well,' said Bishop, 'I'm a Yankee, and I won't take any advantage of you by carrying off your flies,' and drawing the slide, he liberated the whole swarm about the butcher's ears, and beat a retreat under cover of a little the loudest buzzing ever heard in that vicinity."

Cattle at the Paris Agricultural Exhibition.

The finest cattle exhibited at the above named exhibition, recently held in Paris, were what are called the "Angus breed." They surpassed the Durhams and Herefords, and were the objects of general admiration. They have no horns, and are mostly spotted—black and white. They are raised in the counties of Forfar and Kincardine, in the north Great Britain.

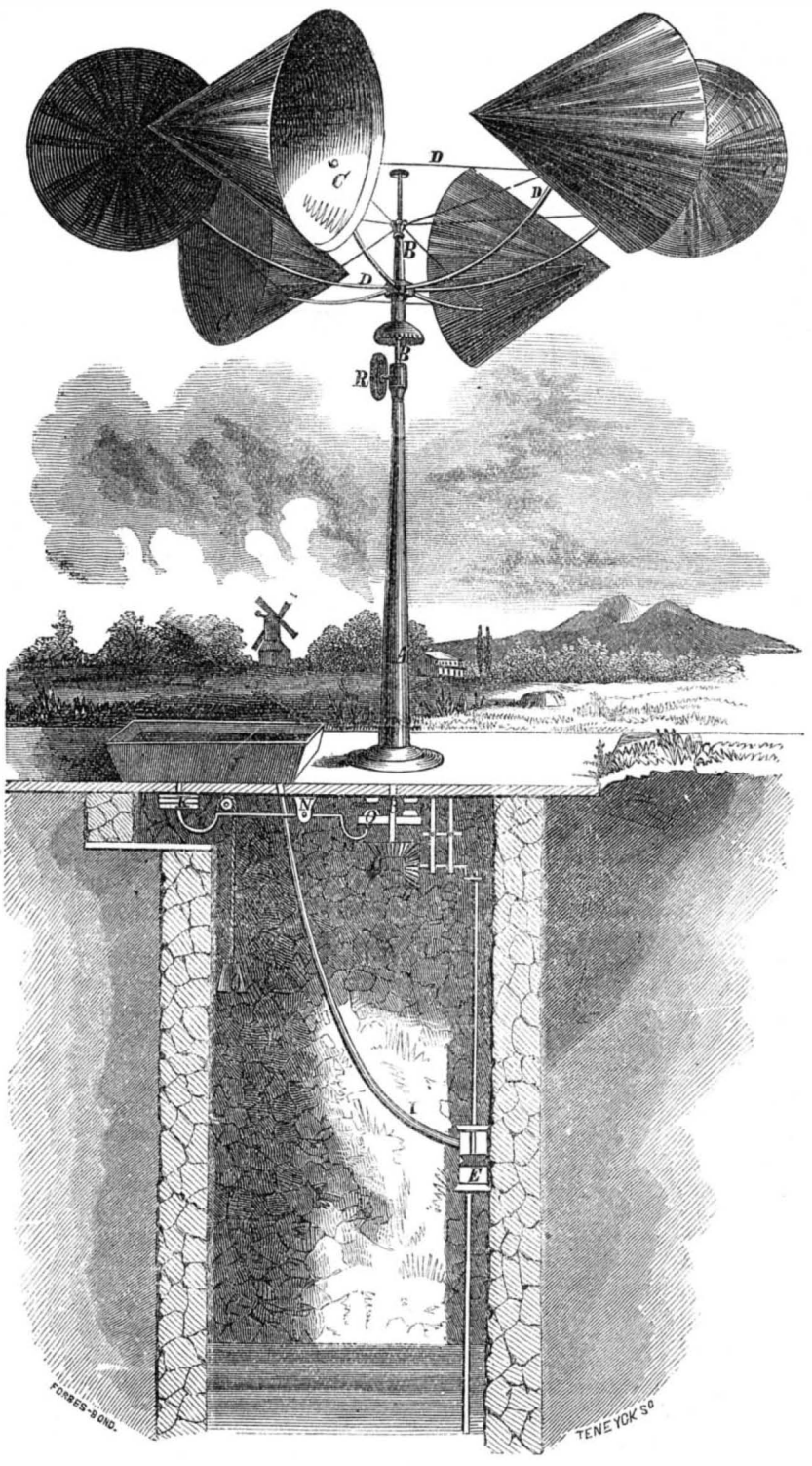
Yankee Washing Machines Abroad.

A late number of the London *Times* contains a long notice of Hollingsworth's Washing Machine, which, it appears, has found its way across the Atlantic. In this machine a number of buoyant balls made of wood, are employed as rubbers. The inventor, Mr. Christopher Hollingsworth, is a farmer of Indiana. The Dutchess of Sutherland and others of the nobility appear to have taken quite a fancy to the contrivance.

Steam Music.

The steamboat *Glen Cove*, running between this city and Albany, regales its passengers with music from a steam organ. It is heard at the distance of some miles before reaching the wharf playing "The Campbell's are Coming." The patent for this ingenious invention was secured through the Scientific American Agency for this country, and noticed on page 245 of the present volume. Patents have also been taken out in most European countries.

IMPROVED HORIZONTAL WINDMILL.



New Horizontal Windmill.

Our engraving illustrates an improvement for which letters patent were granted to Messrs. Jacob W. Goodwin and Moses C. Hawkins, of Edinburg, Pa., April 8, 1856.

The principal features of novelty consist in the employment of hollow cones to catch the wind, instead of flat vanes or sails; also in a peculiar method of regulation when applied to the pumping of water.

Referring to the cut, A is a hollow standard which supports the apparatus, B the revolving spindle to which the hollow wind cones, C, are connected and supported by means of rods, D. E is a force pump, operated by means of its piston rod, F; the latter is operated by the crank shaft of the pinion, G. H is a pinion on the lower end of revolving spindle B. Pinion H gears with G, and thus the motion of spindle, B, and cones, C, is transmitted to the pump.

The regulation is done in the following manner:—The water rises from the pump, E, through pipe I, into tank J. K is a small hydrostatic bellows, connected by an opening with the bottom of the tank. L is a curved rod, extending from the bottom of bellows K to the end of brake lever, M. The latter is pivoted at N, and its forward end terminates just below the brake pulley, O, which is attached to spindle B. When the water rises in tank J to a given line, its weight expands the bellows, K, which, being connected with the end of lever L, the latter draws down the back end of M, while its front end rises and lifts pulley O, raising with it the spindle, B, and its pinion, H. The two, pinions, G H, are thus disconnected, and the pump stops, so that tank J cannot overflow. When pulley O is raised, the rubbing surfaces, P, come in contact with similar surfaces immediately above, and the friction of the two, being equivalent to the power just previously consumed on the pump, the speed of the wind mill will continue the same as it was before the pump was disconnected. Q is a weight, attached by cord and pulley to the back end of lever M. When lever M is pressed down, weight Q rises. Therefore the bellows, K, will not operate until the weight of the water in the tape overbalances that of weight Q. R is an adjusting screw, by means of which the rotation of the spindle, B, and of the whole apparatus, can be instantly shifted when desirable. The mouths of the cones being always presented to receive the wind, while the points move against the same, an effective power is obtained, no matter in what direction the wind is moving.

The windmill requires no vane or attention to bring it properly before the wind. It is self-acting in all respects, simple, durable, noiseless in operation, economical in manufacture. On the prairies, at railroad stations, and at all localities where power is needed for the raising of water or other purposes, it will be found highly useful. For further information address the patentees.

Recent Foreign Inventions.

Singeing Fabrics by Superheated Steam.—J. L. A. Hulliard, of Paris, patentee.—In order to impart to cotton and linen cloth a beautiful smooth surface, it has to be singed to remove the long wool. This is commonly done by passing the cloth, in pieces, over jets of gas light—a very delicate operation—requiring the nice adjustment and running of the rollers which guide the cloth. The invention of Hulliard consists in heating a metal plate with highly superheated steam, then passing the cloth over this plate. The improvement appears to be a good one. Wood can be completely charred with superheated steam, consequently its heat imparted to a metal plate may be expected to singe textile fabrics in a superior manner to jets of gas light.

Instead of employing starch and gum as a dressing for cotton and linen cloth, he uses the cyanides of zinc and tin, then passes the cloth over a cylinder in which superheated steam circulates, and the high heat of which oxydizes the metallic dressing, and gives to the surface of the cloth, when callendered a fine appearance.

Annealing Wire.—J. Cocker, of Liverpool, Eng.—This improvement consists in first heating the wire in an oven, then passing it into a closed chamber to cool so as to anneal it perfectly.

Varnish for Exposed Iron.—J. E. Cook, of Greenock, N. B., patentee.—This varnish consists of six pounds of gum shellac dissolved in a gallon of methylated spirit, or common wood spirit. This is stated to be an improved varnish for iron work exposed to a moist atmosphere where it is liable to rust.

(Methyle $C.^2 \cdot H.^3$) is a hypothecal base not yet obtained separate, but its oxyd is easily obtained by distilling common wood spirit with alcohol. Wood spirit is formed by the destructive distillation of wood. The varnish is claimed to be of a superior quality for coating, plaster, and brick work, and silvered glasses, to prevent the action of moisture in the atmosphere.

Manufacturing Iron.—H. Bessemer, of London, Eng., patentee.—This inventor claims the application of heated currents of air or steam in eight different methods, to iron and steel, in a molten state, in furnaces and crucibles, in order to free it from impurities and improve its quality. The injection of jets of steam into molten iron improves it, but the use of steam for this purpose is not new—only the method.

Washing Textile Fabrics.—A. & J. Wallace, of Renfrew, N. B., patentees.—The claim of these inventors embraces the injecting of currents of hot air into the common dash wheels employed in bleach works for washing pieces of cotton cloth. A pipe passes into the dash wheel through a stuffing-box, and the hot air is driven through it into the apartments of the wheel.

The French Academy of Sciences have appropriated 2,000 francs to make experiments with balloons, by M. Poitevin.

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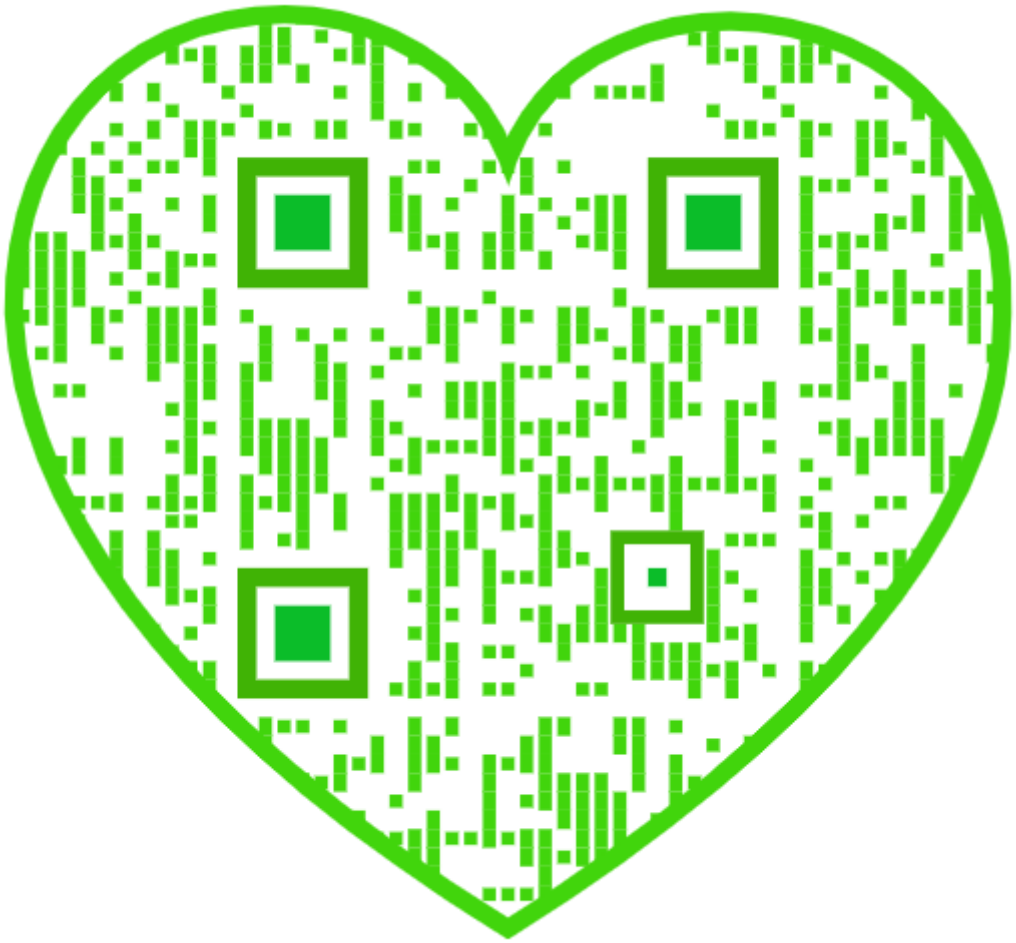


New Inventions.

American Association for the Advancement of Science.—No. 2.

Gar Pikes.—Old-Fashioned Fish.—John E. Gavitt, Esq., of Albany, exhibited a vase of young gar pikes, when Agassiz said :—

" If it were announced that some of the old Egyptians were outside, he should not be able to keep his hearers inside. This apparition of the oldest fashioned fish alive was hardly less striking. There were very few types of this kind to be found among living fishes, but there were many among fossils. It had what other fish had not, a ball and socket joint in the neck, so that they could bow ; this was common to them with reptiles. Their pectoral fins were small, and continually in a vibratory motion, like the cilia of anamalcules. In the Old Red Sandstone he had found a fish which he called Glypticus, with the same sort of a tail. This went with so many other things to show that the order of succession in past times was exemplified now in the develoepement of individuals. Here were also two features observed in genuine reptiles, the power of moving the head on the back bone, and the quasi tail. He noticed also that while these gar pikes had something approaching the reptile's apparatus for breathing they had gills as fully developed as those fishes which breathed only through gills.

Col. Foster stated that in the Ohio strata corresponding with the Onondaga limestone of New York, fossil gar pikes were found, and they were evidently a deep water fish, as this limestone must have been deposited in deep water.

Prof. Dana, from appearances on coral islands, argued that a very solid limestone, without ripple marks, might be deposited in water not deeper that 40 or 50 fathoms.

Prof. Hall said that the occurrence or absence of ripple marks was not an infallible mark of deep or shallow water. It was only when earthy deposits were made upon them that they were preserved.

Prof. Dawson, of Nova Scotia, inquired whether there was any particular adaptation of the gar pikes to their haunts, which are among the rushes ?

Prof. Agassiz said that they bore some resemblance to alligators both in shape and habits, and that they haunted the same class of places.

Comets.—Dr. Peters, of Cambridge, Mass , read a paper on a comet discovered by himself at Naples in 1846. He has computed its expected places to 1860, and indicated upon a chart the limits of space within which it is to be sought at any specified time. He then spoke of the peculiar value of the periodic comets, as showing the nature of the interplanetary spaces, and of the real service which amateurs can render to astronomy by searching for comets. This work cannot be undertaken by those who are occupied in regular observations, and the comet medal of the King of Denmark was of great value in stimulating research by amateurs. As interest in science appears to be decreasing in Europe and increasing in America, Dr. Peters hoped that a similar medal might be proposed here.

Dr. Gould wished to express his sense of the gratitude due from astronomers to Dr. Peters for his services in these eleven years of labor upon the comet, and especially for the extreme beauty of the method of search proposed by Dr. Peters—the restricting of the probable field of the appearance of the comet at any day to a narrow line. He thought that the non-appearance of certain comets of short periods might arise from variations in the luminosity of the comet.

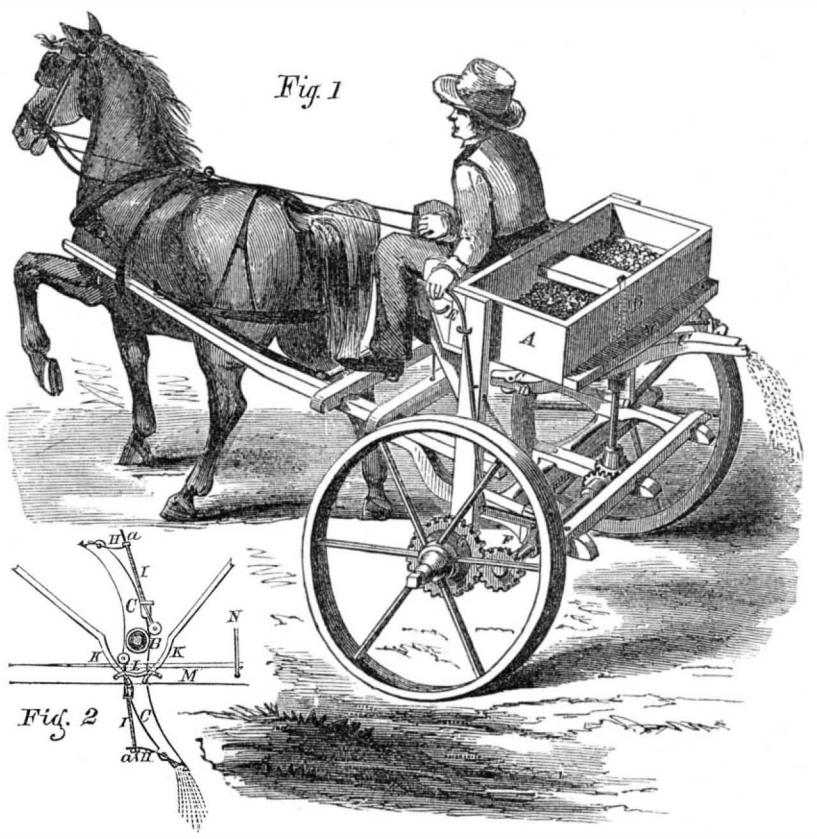
Cyclones, or Typhoons on the North Pacific.—Mr. W. C. Redfield, of New York, read a paper on this interesting subject. It comprised notices of about thirty cyclones of violent character in the trade-wind latitudes of the North Pacific. As regards the several months of the year, their occurrence was as follows: In February, one ; April, one; May, two; June, two ; July, three ; August, four ; September, four ; October, six ; November, four; December, one. At the Marian Islands, about latitude 13° N., they are looked for in December and January, as well as in the summer months.

Immediately at the close of the paper, Dr. Hare asked Mr. Redfield what he meant by a cyclone. Mr. Redfield answered, a wind which moved in a curved line. The Dr. objected, in quite a long speech, to the theory and views set forth in the paper.

When he had concluded, Mr. Vaughan made the remark that an upward current of air would infallibly produce a whirlwind.

Dr. Hare replied : When you have read my book, sir, you will be better qualified to form a judgment upon the question, and to take part in the discussion.

IMPROVED SEED PLANTING MACHINE.



New Broadcast Sower.

In this improvement the seed is deposited in a box, A, and flows down through a tube, B, into the curved hollow arm, C, by whose centrifugal motion the seed is scattered broadcast. The arm, C, is attached to the upright spindle, D, which is rotated with great rapidity, by means of pinions and gear wheels which derive power from the axle of the vehicle. The connections for this purpose will be readily apparent by reference to the cut. E is a lever by moving which the pinion, F, is instantly disconnected from the driving gear wheel, G, and the seed sowing apparatus brought to a stop.

The extremities of the arms, C, are furnished with valves, H, each of which is connected by means of rod and spring, I, and rollers, with a cam arrangement, K L, attached to the under side of the bottom board of box A. (See fig. 2.) The object of the valves and adjuncts is to regulate the quantity of seed sown per acre, and also to prevent the scattering of seed except from that end of hollow arm C which sweeps out at the rear of the machine. Were the seed allowed to escape indiscriminately from both ends of C, portions of it would strike the vehicle, or animal, and be improperly scattered.

The tendency of the springs, I, is to keep the valves, H, constantly closed, and they never open except when the arm, C, revolves and brings friction rollers J against the cam surfaces, K L. The duration of contact between the rollers, J, and cam surfaces is equivalent to the time occupied by the arm, C, in sweeping around the rear of the machine. The valves, H, are therefore open, and the seed escapes, when the extremity of arm C begins to emerge from beneath the seed box, A, but the valves instantly shut, when the extremity of C has finished its rear sweep and begins to go under box A again. The quantity of seed sown per acre is regulated by adjusting the nut, *a*, (fig. 2,) which releases or tightens the pressure of springs, I, on the valves, H.

The cam surfaces, K, it will be seen, are formed by bending the ends of the rods of which they are composed. Cam surface L is attached to a movable cross bar, M, one end of which is hinged to box A. A rod, N, extends from M to a point near the driver's seat within his reach. When he wishes to stop the discharge of grain he pushes rod N, and throws M out a little (fig. 2.) This carries the yoke, L, towards the outer ends of K, and they open so that rollers, J, when they come around, cannot touch the cam surfaces; consequently the valves, H, remain closed, and no discharge of seed takes place.

This machine will sow all kinds of grain or grass seeds at the rate of from four to six acres per hour, doing the work in the most even and perfect manner. The patentee states that its cost is not much more than a common gig, for which the vehicle may also be used if desired, the seeding arrangement being so fixed as to be easily removed. Or the wheels of a common wagon may be conveniently applied during the seeding operation, thus saving a portion of the cost. Invented by Enos Stimson, North Craftsney, Vt., of whom, or of A. Stimson, Chicago, Ill., further information can be had. Patented May 6, 1856.

The Scientific American.

We cannot sufficiently draw attention to the advertisement of the Scientific American, published weekly at New York, the name of which indicates its character. It is the only paper of its kind in the United States, and we hardly think that its value is duly appreciated by mechanics and manufacturers of all degrees, for it touches fully every appliance with which they are associated. It records all new inventions and discusses their character, and every amateur and practical mechanic in the country should have the paper at his hand.—[Boston Courier, Aug. 28th, 1856.

[The above is only *one* out of hundreds of complimentary notices from the newspaper press which we might insert did our space permit.—Eds.

Yellow Fever.

A few cases of this dangerous disease originating from foreign vessels, have occurred at the New York Quarantine, and vicinity, eight miles from the city, giving rise to the most exaggerated statements. In some of the country districts it is rumored and believed that a most fearful epidemic is raging in this city, that the people are dying off like rotten sheep, and that sure death awaits all strangers who venture into our limits.

It is proper to say that all this is foolish nonsense. No yellow fever exists here at all, and the city was never in a more healthy or salubrious a condition than *it is* at the present moment.

The Boiling Springs of Utah.

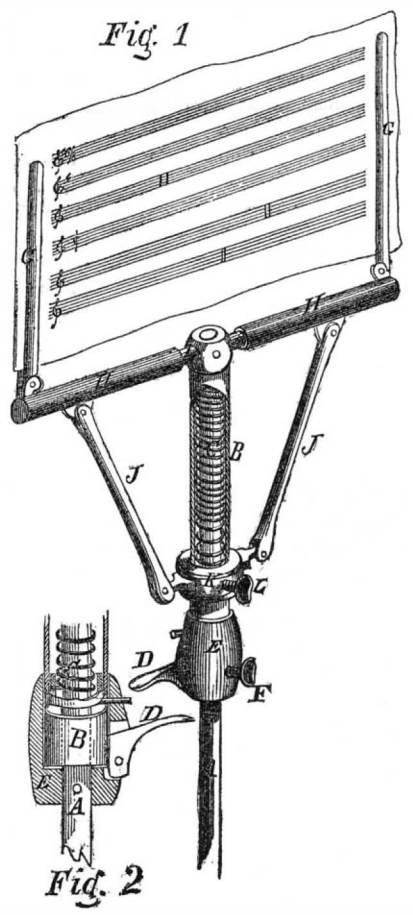
In Washhotah Valley, Utah, there are ten boiling springs, which are great natural curiosities. They are situated on the banks of a stream and pour out their waters seething hot, with a great noise. The waters hiss and dash over jagged rocks, and jets of steam hot enough to scald the hand are also forced out. Deposits of sulphur and alum are found in their neighborhood, and the whole appearance of the region evince a powerful volcanic action.

Notices of cases sent to the Patent Office and of moneys received on account of patent business for the week ending August 30th, are necessarily deferred until next week.

Improved Music Holder.

By Thomas Ward, Birmingham, Huntington Co., Pa.—The object of this contrivance is to promote the convenience of band musicians. It is intended to be attached to some suitable part of the instrument carried by the performer. The chief novelty consists in the combination of a spring or trigger with the spindle of the holder in such a manner that when the performer touches the trigger the spindle will instantly revolve and present the opposite side of the sheet of music to his eye, thus preventing any interruption.

In our engraving, A is the spindle, covered at its upper part by a case, B. C is the spring, which is spiral in form and encircles spindle A. D is the trigger, pivoted to an adjustable hub or boss, E. F is the screw for adjusting E. The lower part of case B fits into hub E. The manner in which trigger D detains the case B, is shown in fig. 2. When the trigger is pressed down, B is released and revolves half around. The spring, C, is attached by one end to A and by the other to B, thus causing the revolution. The music is



supported between the slotted holders, G, which are hinged to the sliding tubes, H. The latter are supported on the cross piece, I, which passes through the head of spindle A. The tubes, A, are connected by means of rods, J, with collar, K. When it is desired to spread the holders, G, further apart, so as to accommodate wider pieces of music, the tubes, H, are drawn out latterally, the rods, J, spread, and the collar, K, rises. L is a screw in the collar, K, which holds the latter, and its adjuncts in any desired position.

This is a very simple, cheap, and useful improvement. In full size it is hardly twice the dimensions shown in our cut. For further information address the inventor as above.

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Scientific American.

NEW-YORK, SEPTEMBER 6, 1856.

The Past and the Future.

With this number of the SCIENTIFIC AMERICAN the labors of another year are added to those of the past, and we close the well-filled leaves of Volume Eleven to open the virgin pages of Volume Twelve.

Our record for the years 1855–56 exhibits a most gratifying increase in the stock of useful knowledge, and a highly satisfactory state of progress in the arts and sciences throughout the globe. In our own country this progress has been more apparent and extensive than, perhaps, elsewhere; for we have enjoyed the blessings of peace and a full measure of material prosperity. Europe, however, has been convulsed with bloody wars—calamities whose influence upon the intellectual affairs of mankind is always baneful.

We return our heartfelt thanks to the noble host of patrons who have honored us with their attention and patronage during the year now brought to a close. They have our warmest wishes for their individual prosperity and success in all that can contribute to their happiness. We have honestly endeavored to benefit them and thus to merit their approbation We have good reasons to believe that, in some respects, at least, we have been successful. It is under this belief that we propose to commence another new volume, determined to labor with increased ardor, and, if possible, render ourselves and our journal more and more useful in the world.

We cordially invite all our old friends to lend us their co-operation. We hope that each of them will endeavor to bring over some new recruits into the ranks of those who love knowledge and believe in its elevating power.

Route of the Monopolists.

The utter defeat of the Woodworth Patent Bill at the late session of Congress is regarded with great satisfaction by mechanics, inventors, manufacturers, and all classes of people throughout the country.

Those who labored against that iniquitous scheme may congratulate themselves upon the entire success of their work. The victory was most complete. Notwithstanding the vast sums of money which had been pledged to procure its passage, and the almost superhuman efforts that were put forth by its myrmidons, the Bill came far short of a success. No committee reported in its favor, and it did not even reach a second reading, much less a discussion, in either branch of the National Legislature. Had it reached the latter stage, it would, beyond doubt, as circumstances now show, have been rejected. Resolutions from many of the States instructing their representatives not to vote for it, denouncing the monopoly, and requesting Congress to refuse its extension, had been sent in, besides petitions and letters from individuals, villages, towns, and cities in large numbers, all aided by the thunder voice of the public press. These had their proper effect, and the general feeling of the Members of Congress became adverse to the schemers.

The resulting consequences will be of the highest importance. On the 6th of December, 1856—just three months from to-day—the Great Monopoly which for a whole generation has been a terror and a scourge to inventors, and a cruel extortioner among the hard-working masses, will fall to the ground. A new and broad field for genius and industry will then be thrown wide open to all.

We derive great satisfaction in feeling that we have contributed, in some degree, to this noble result. All the means in our power have been long and faithfully employed towards its achievement, as the readers of our columns well know.

All inventors having improvements in planing machines who have been driven to the caves by the Woodworth Monopoly, may now come forth from their hiding places.

All mechanics who desire to enter into the lumber-planing business may now make the necessary arrangements.

All machinists may now prepare to take orders for the construction of Woodworth Planing Machines.

All improvements hitherto locked up, because of alleged infringement, may now be put into operation.

The demand for lumber-working machinery will be very large in December next. Those who are earliest prepared to take advantage of the great opening will be likely to reap the richest harvest.

In addition to the Woodworth Patent extension, several other attempts to revive and extend odious monopolies were strangled by Congress. Among these were *McCormick's* application for a renewal of his Grain Cutting Machine patent, which expired in 1848; *Hayward's* Rubber patent, expired 1853; *Harley's* Iron Casting patent, expired 1849; *Nock's* Padlock patent, expired 1853. Whatever shortcomings may be laid to the charge of the late Congress, it is certainly entitled to the thanks and gratitude of the people for having refused to breathe the breath of life into the above batch of monstrosities.

The only patent extension granted during the session was to Isaac Adams, Boston, Mass., for his printing press. This patent had already been extended seven years by the Commissioner of Patents, and would have expired in 1857. Its present extension, although a matter of little public importance, should never have been allowed. Congress has already made general laws for the government and protection of inventors. It ought not to disregard those laws for the special benefit of single individuals. In the cases of poor inventors who appeal for relief, let a sum of money be donated, if need be. But let us have no suspension of time-honored laws, bringing ruin and injustice upon others, in order to bestow charities upon single individuals.

The Claims of Inventors.—Henry Cort, the Inventor of Puddled Iron.

The iron manufactures of England far surpass those of any other nation—they command the wonder and admiration of the world. The yearly make of rolled and puddled iron of that country now amounts to 200,000 tuns—50,000 tuns of which are exported. Eighty years ago, instead of exporting wrought iron Britain was a large importer from Russia and Sweden, paying out annually about $7,500,000; now it exports iron to these very countries.

What has produced such a great change, and given England such sources of wealth and power? Not the policy of the government, but the inventive genius of Henry Cort, who was deeply wronged by government officials, and his family reduced to comparative poverty.

We have already noticed this case in our columns, and our remarks on it have been copied with approbation into several British journals. The London *Times*, in a strong article, has advocated the claims of Cort's heirs, and there are some prospects of their being prosecuted to a successful issue.

Henry Cort was the inventor of puddling iron, and rolling it by grooved rollers; these were the greatest improvements ever made in the manufacture of wrought iron. The idea is too often held up by those who are not deeply versed in the progress of manufactures, that government favor is the great cause of their developement, in nations. This is a great mistake; inventors are the great improvers of manufactures; governments more often throw impediments in their path than afford them assistance. In England, men are knighted, made Peers, granted pensions and high titles, whose claims to such distinctions are but very barren—so far as they relate to the welfare of the country—in comparison with those of her inventors. Great warriors and orators, generally, are the recipients of government favors, not inventors and men of solid genius. There are some honorable exceptions, to be sure; but the rule and custom has been to heap honor upon the descendants and relatives of the land Barons, and to overlook the claims and worth of the industrious classes.

Henry Cort did more to advance the real greatness of England than Wellington, yet the heirs of the former are living in comparative indigence, while those of the latter are swathed with honors and revel in donated riches. This is not just, nor honorable. England can afford to be just and generous to her sons of genius and industry; and the recent elevation of Mr. Strutt, a manufacturer, gives evidence of a forward step in the right direction. But the throne and the peers must elevate their policy higher still, if they would act wisely for themselves; they should admit the manufacturing and mercantile classes to a full communion of association founded on worth.

Every nation that is governed by a wise and just policy, will encourage and reward its inventors generously, but no nation on the face of the earth has yet done so; we include our great Republic among the number. We have hopes of better things for the future; and we hope that England and the United States, who have been so largely benefitted, will do justice to the heirs of Henry Cort. Why cannot our iron manufacturers start a subscription for the benefit of Cort's heirs, and thus show to the world that genius is appreciated, no matter upon what soil it flourishes?

Recent American Patents.

Improved Potato Digger—By Silas Woolson, Moodna, N. Y.—This implement consists of two large bars or levers, pivoted together in the center, somewhat like a pair of scissors. One of the bars is furnished with prongs like a fork, at one end, by which the potatoes are raised. The other bar is used as a fulcrum for the fork. The forked bar is slotted at its center, so that it may be drawn up or thrust down, and also hinged on the pivot. In use the operator thrusts the fulcrum bar into the earth, and holds it erect with one hand, while with the other he pushes the end of the forked bar under the hill and then bears down. The potatoes are in this manner all lifted out, and the dirt falls through the prongs. This apparatus renders the labor of potato digging comparatively easy.

Contrivance for Milking Cows.—By William H. Whitman, of Bailey Hollow, Luzerne Co., Pa.—Consists of a square box the top of which is perforated with four holes, placed at the proper distance apart, to receive the teats of the cow. The insides of the holes are lined with a series of spring fingers connected with a cam, in such a way that when a small crank is turned the fingers will press the teats and cause the milk to exude. The operation resembles the ordinary process of hand milking. The milk falls to the bottom of the box and flows thence through a flexible tube to a pail or other receptacle.

Safety Gas Burner.—By Augustus R. Marshall, of Stratford, Conn.—This improvement consists of a safety attachment for gas burners, whereby, whenever the gas is blown out by a current of air or otherwise, its escape will be immediately arrested, and waste or other bad consequences prevented. Without drawings it would be difficult to explain the parts. It will be sufficient to say that there is an air chamber so connected with a valve, that when the gas is burning, the air chamber is expanded by the heat, and the valve thus kept open. But when the gas is extinguished, the air chamber contracts, the valve falls, and the gas is shut off.

Condenser for Steam Engines.—By John T. Denniston, of Lyons, N. Y.—The object of this invention is to complete condensation and obtain the vacuum at an earlier point in the stroke of the engine; also to expel the water and air from the condenser, (the condenser used being the wet condenser,) through separate channels and at a less expense of the power of the engine. The invention is adapted for river boat engines, in which the vacuum apparatus is above the water line, as well as for stationary engines, whose condensing apparatus is at a higher elevation than the source from whence the water for condensation is derived.

Instrument for Measuring Distances and Altitudes.—By E. A. Crandall, of Friendship, N. Y.—This instrument consists of two telescopes, sight tubes, or other sighting devices, placed at certain fixed distances apart, on a suitable table. One of the telescopes is stationary, relatively to the table, and the other movable on a fixed pivot, in a line that forms a right angle to the stationary one, so as to be capable of bein brought to bear upon the same point or object. The movable telescope has attached to it an index, moving over a graduated scale of distances on the table, by which, when brought to bear on the same point or object as the stationary one, it indicates on the said scale the distance of the point. The operation of the instrument is based upon the well-known principle in trigonometry, that when the length of the base of a right angled triangle is given, the adjacent angle formed by the hypothenuse serves to determine the length of the perpendicular.

Contrivance to Prevent Liquids Boiling Over—By John Leiblong, of Waterbury, Conn., (assigned to Edward Brown and J. R. Case.)—Consists in placing a conical shaped cap within the vessel, said cap having an opening at its apex, over which a deflecting plate is placed. The whole is so arranged that the boiling liquid will pass up through the opening in the apex of the cap and striking against the deflecting plate, will run down again into the vessel. The liquid is thus effectually prevented from passing over the sides of the vessel.

Improved Fountain Pen and Indelible Pencil.—By Nelson B. Slayton, of Madison, Ind.—Office 290 Broadway, New York City.—This improvement consists of a hollow tube tapering to a point like a common ever-pointed pencil. The point is slitted from its apex, for a short distance, up two or more sides. The tube is filled with ink, which, when at rest, remains confined, and cannot escape. But when the point is moved in contact with a sheet of paper, as in writing, the ink flows freely as fast as wanted, but no faster.

This contrivance moves over the paper with all the ease and smoothness of a lead pencil, yet the inscription made is with veritable ink. There are no nibs to catch in the paper, no spattering or blotting, no ink-stand to be continually dipped into, and no valves to be regulated. The instrument may be carried in the pocket like a common pencil. It is, in fact, a complete pen, inkstand, and pencil, all combined. By turning a nut at the cap the mark produced will be fine or coarse. The inventor informs us that he was led to attempt the invention of an improvement of this kind from an article published in the SCIENTIFIC AMERICAN setting forth the need and advantages of such an improvement.

Patented in the United States, Great Britain France, Belgium, etc., through the Scientific American Patent Agency.

Machine for Sorting out Ivory Combs.—By William Fosket and Benjamin S. Stedman, of Meriden, Conn., (assignors to Julius Pratt & Co.—In the manufacture of ivory combs the blanks are generally cut of as great length as the width of the elephant's tusks, out of which they are made, admits. Therefore there is always a great variety of lengths, and many of them are so nearly of the same size that it is difficult to detect any difference without comparing them closely, side by side.

It is desirable in putting the combs up in packages of dozens, more or less, to have all the combs in one package of the same size exactly. The only way of sorting them heretofore employed, has been to pick them out by hand, which is a slow and tedious operation, requiring great practice to acquire any considerable degree of skill. The machine now patented is intended to perform this operation of "sizing," as it is termed, with great exactness and dispatch.

It consists of a round table with a slot or groove cut through around its edge. Said slot is made in flaring form, being wider at one end than the other. The blanks are placed one at a time, across the head or movement part of the slot; there is a pointer in the center of the table, which then comes around and sweeps the blank along the surface of the slot until a point is reached where the slot is wider than the blank, when it falls through. Boxes are arranged beneath the slot, into which the different sizes fall, and thus are separated.

Missing Numbers.

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LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING AUGUST 26, 1856.

EVAPORATING SALT—Wm. G. Clough, of Newark, N. J.: I do not claim the individual parts of the above described apparatus, but, I claim the apron H, chamber B, and escape flues F F', arranged and combined with the pan A A' A'', in the manner and for the purpose specified.

WINDMILL—Wm. C. Chambers & Thos. S. Hargraves, of Brooklyn, N. Y.: First. We claim attaching the plate E, which supports the wheel, to the rudder plate, in such a manner as to allow it a vibrating, rotary motion, whereby the mill is rendered self-regulating, substantially as described.

Second. We claim the combination and arrangement of the segment gear O, pinion P, drum Q, and weights M and N, (or any equivalent mechanism,) for retaining and holding the wind-wheel always in proper position, substantially as set forth.

HAND SEED PLANTER—J. Herva Jones, of Rockton, Ill.: I claim, the use of a hinge or joint B B, or its equivalent for connecting two single hand-planters at their tops, for the purpose of allowing them like a pair of compasses to contract and expand in their operation, as set forth.

PREVENTING LIQUIDS FROM BOILING OVER THE SIDES ON VESSELS—John Leiblong, (assignor to Edward Brown and James R. Case,) of Waterbury, Conn.: I claim the cap, B, placed within the vessel, A, and constructed and arranged substantially as shown and described, for the purpose set forth.

SIZING COMB BLANKS—Wm. Fosket and Benjamin J. Stedman, (assignors to Julius Pratt & Co.) of Meriden, Conn.: We claim the gradually receding edge, a, arranged within or around, and inclining toward a rebate, f, so as to form a tapering opening, E, between them, with a resting place, c, at the narrow end of the opening when combined with a set of arms, G G, rotating or otherwise moving over the opening, and with boxes, compartments, or other receptacles below, to operate substantially as and for the purpose set forth.

SEWING MACHINES—A. F. Johnson, (assignor to himself and F. A. Houghton,) of Boston, Mass.: I do not claim the feed motion described, and that although eccentric shuttle throwers have been used before I cannot find that the pivoted swinging ellipse or a thrower has been so combined with a cam which operates it as to get a quicker motion of the shuttle when the cam operates near the point and is throwing the shuttle forward through the loop than when it is drawing it back.

I claim the combination of a swinging ellipse as a shuttle thrower hung on a pivot, with a cam on the driving or other rotating shaft, so operating with said swinging ellipse as that when the cam is bearing upon it near its pivot it shall move the shuttle faster or through a larger space in the same time than when it is bearing upon the other parts, for the several purposes set forth.

Second, I claim the combination of the rocker shaft and its arm, K K, and connecting rod with the grooved cam, operating together for giving the required motions to the feeding plate, substantially as described.

Third, I claim the means employed for varying the length of the feed motion, and consequently the length of the stitch at pleasure, the same consisting of a screw shaft working in the vertical hollow shaft that moves the rocker shaft, and raising or lowering a loose collar to which the connecting rod, p p, is attached.

FELTING HAT BODIES—Jos. Thomas, of Brooklyn, N. Y.: I claim in hat sizing machines the employment of a discharging slotted wheel, when arranged as described, for feeding the goods into and through the machine, essentially as set forth.

POTATO DIGGER—Silas Woolson, of Moodna, N. Y.: I claim the employment of an open concave digger, arranged and combined with a movable standard, as and for the purpose set forth.

MILKING COWS—Wm. H. Whitman, of Bailey Hollow, Pa.: I claim placing the fingers, F, within a case, A, and at the sides of holes, b, in the case, the fingers being vibrated by means of the eccentric rollers, D D, and the elastic bars, G G, the whole being arranged substantially as shown for the purpose specified.

GRAIN CLEANER AND SEPARATOR—Richard Ward of Edinburgh, Ind.: I claim the combination and arrangement of the curved board, q q, with the slide, R R the chaff conductor, S, and the slide, T T, substantially in the manner and for the purpose specified.

FARM GATE—Caleb Winegar, of Union Springs, N. Y. I claim my method of opening and closing gates by means of the ratchet drum, E, the weight, K, or an equivalent spring to draw back the said ratchet drum through an intervention of the chains and rods, B B, in the manner substantially as described.

Second, I claim my arrangement of wood and chain, N, connected with the spring catch for the purpose of detaching the latch, in the manner substantially as described.

BRACE—Daniel M. Baird, of Warrensville, N. Y. (assignor to Nathaniel Potter, Erie County, N. Y.): I claim, first, inserting the mandrel, B, in the chamber in the shank of the brace, this I claim in combination with the washer, F, set screw, G, and thumb piece, D, arranged in the manner described and for the purpose set forth.

Second, I claim the manner of attaching the head of the brace to the spindle, L, by means of the thumb nut o, and collar, N; this I claim in combination with the chamber that receives the collar and screw of the thumb nut, O, in the manner substantially as subscribed for the purpose specified.

BEDSTEAD—Elias Howe, Jr., of Brooklyn, N. Y.: I am aware that spring beds of various descriptions have heretofore been made, and I do not claim the use of springs for such a purpose; but I claim, a spring-bed constructed of a series of springs which overlie each other, all combined together and arranged in an inclined position upon a bed bottom, substantially as set forth.

AIR-HEATING FURNACES—John Liddle, of New-York City: I claim, first, the construction of the main body of the furnace, substantially as described—forming, by plates attached to the internal surface, a series of tubes around its circumference—so as to form the smoke flues without any vertical joints between the interior and exterior, and without the employment of cores in casting, as set forth.

AUTOMATIC ATTACHMENT TO GAS BURNERS—A. R. Marshall, of Stratford, Conn.: I claim, first, the combination with the thermostat p, and valve D, of the catch n, on the bar n', and the system of levers h H, for the locking and unlocking of the valve, in the manner and for the purposes specified.

Second. Combining with the locking-catch n, or its equivalent, which is acted upon the thermostat p, and the catch j, so arranged as to lock the valve open, until the catch n is set in operation by the action of the thermostat, and then to be moved out of the way by the catch n, substantially as described.

CURTAIN FIXTURES—Purches Miles, of Hartford, Conn.: I claim, the levers E E actuated by the coiled springs F F, in the manner and for the purpose substantially as set forth and described.

HAND CORN PLANTERS—Cornelius Marteall, of Albany, N. Y.: I claim, the combination of the staff A C, collar g, and spade A B, with reservoir a a b b; the whole being arranged and operated in the manner and for the purpose described.

CONDENSER FOR STEAM ENGINE—John T. Denniston, of Lyons, N. Y.: I claim, first, forming a partial vacuum before the commencement of the eduction of the steam from the engine to the condenser, by first filling the condenser with water, and then partially withdrawing the water to form steam space, substantially as set forth.

Second. Suspending the water in the condenser, in a number of cups or cells v v, with perforated bottoms and passages w w, between them, thus causing the steam to circulate among and over and under the water, in the cups and through the shower of water falling through the condenser.

SELF-ADJUSTING FOG-BELL—Henry L. De Zeng, of Geneva, N. Y.: I claim, the attaching a float to a lever or arm that is connected at or near the other end to a fixed vertical shaft or axis in such a manner that said float shall be allowed to swing around said vertical shaft or axis, and accommodate itself in the direction in which the swell or current or both, are moving—so that said float is not subjected to any sideways concussion or strain from either the tide or swell, but is free to oscillate or vibrate with the swell, and communicate motion to any suitable bell or other alarm, substantially as specified.

Second I claim, attaching the ends of a chain or its equivalent, on opposite sides of a lever that receives a vibrating or oscillating motion from a swell, when said chain is passed over a cam wheel or other similar article to communicate the motion imparted to the lever and chain to the hammer of a bell or other signal of alarm, as described.

Third. I claim the arrangement of the cam g, and catch h, rotatively with the heel of the hammer and with the chain, substantially as specified, whereby the vibrating motion of the chain works the said hammer, as set forth.

CULTIVATOR—Harvey D. Gause, of Freehold, N. Y.: I claim, so constructing and arranging my cultivator, by means of the clevis x, the beams M and brace n, substantially as described, that, in combination with the seat W, the plows may be guided by the feet of the driver, in the manner set forth.

SEAMLESS HOSIERY—William Goddard, of New-York City: I claim, the process or method of manufacturing seamless hosiery of the form required for what is known as seamless tubular knitted fabrics, such as are knitted on machines that knit the tubes of a uniform diameter, and adding thereto the ribbed top, the heel, and the toe, by hand knitting, or any equivalent therefor, as described.

APPLYING ONE STREAM OF WATER TO RAISE ANOTHER—Chas. P. Ariail, of Roxbury, Conn.: I claim, the arrangement of raising water of two concentric annular channels, to which are affixed self-acting, rotating valves, substantially as to one channel a syphon, through the suction of which and pressure of water following, the rotating valves are operated, constructed and arranged substantially as described.

LAYING OUT RAFTERS—Legrand Crofoot, of Syracuse, N. Y.: I claim, the combination of the adjustable expanding measure A B, with the adjustable bevels D and E, substantially as described, for the purpose specified.

Also, in combination with the above, the fixed square plates sliding on the bevels D and E, substantially as specified and for the purpose set forth.

HAY RAKE—Charles B. Carpenter, of St. Johnsbury, Vt.: I am aware that a rake has been constructed with a fixed head, (similar to the one which I employ,) into which spring steel teeth are inserted, and drawn by power applied to such fixed head; therefore, I do not claim such a rake-head, nor such spring teeth.

Neither do I claim such a rake-head, nor such spring teeth; neither do I claim the wheels or the handles by which said rake is guided, nor the arms K K, neither do I claim the tug (attached to such a fixed head,) of itself alone; but I claim, the slotted bed-plank A, the movable head B, the guide-rods C C, the catch F, and the connecting of the tugs D D, to the brackets E E, by the links n n, or their equivalent device or devices, arranged as described and for the purposes set forth.

MEASURING DISTANCES—Enoch A. Crandall, of Friendship, N. Y.: I claim, the combination of the stationary telescope B, the movable telescope C, with its index bar D, and index E, and the multiplying levers I J K, with their indexes i j k, and springs M and their respective scales e e' o o' p p' and q q', all arranged as described and for the purpose set forth.

APPLE PARER—Charles B. Carter, of Ware, Mass.: I claim the disk H, with its cover L, and slicing knife c, operating in the manner and for the purpose substantially as set forth, viz.—the purpose of the said disk being to regulate the motion of the apple, as described by the pressure of the hand, without the necessity of any other screw: it being understood that I do not claim merely the use of a slicing knife for slicing the apple into a spiral, as that is not new.

GAUGE FOR STEAM BOILERS—Lucius Paige, of Cavendish, Vt.: I do not claim combining with the gauge A, a separate receiving chamber B, arranged between it and the boiler, and connected to both by pipes; but I claim, applying the said chamber B, or arranging it with respect to the gauge, so that it shall partially surround the same, and form a niche or recess H, to receive such gauge, and radtate heat upon it towards its axis, for the purpose specified; the said recess H being provided or not, as the case may require, with the curved cover or slider I, made to operate therewith, substantially as set forth.

I also claim, constructing the gauge in tubular sections of glass or other suitable transparent material, in combination with providing the same with a clamp frame or apparatus, and connection rings and cups, substantially as described.

BRICK MACHINES—Henry B. Ramsay, Indianapolis, Ind.: I claim, first, the wheel A, cranks G G, and catches m m, in combination with the springs s s, for the purpose of regulating the stroke of the knives K K, for cutting the clay at the top of the molds J, as described.

Second. I claim, the sliding mold-table T, for the purpose of raising the mold to the grate under the clay box, when the same is constructed, arranged and operated in the manner and for the purposes set forth.

AMALGAMATOR—Alva M. Stetson, of San Francisco, Cal.: I claim, the employment of the boxes a a a, placed in vertical succession, when said boxes are fitted with tubes or pipes b b b, as described, for containing the quicksilver and distributing the water, as set forth.

MANUFACTURE OF LEAD PIPE—John Robertson, of Brooklyn, N. Y.: I do not claim as my invention any part of the cylinder, nor of the dies, nor of the arrangement thereof in the cylinder, nor of the manner of adapting these to the hydraulic press, nor the mode of operation generally; all of which have been substantially described in the specifications of the patents of Thomas Burr, heretofore referred to.

But I claim, the construction and arrangement of the core i, with the guide h h, in combination with the piston c, for the purpose set forth.

BEDSTEADS—Jacob J. Smith & Jona. H. Pugh, of Philadelphia, Pa.: We claim, first, supporting the four main posts B B, of a bedstead, by screwing or otherwise inserting them so that they shall stand securely without connection with any rails, upon the base A; being held together at its corners by means of the tenons on the said posts—all substantially in the manner set forth and described.

Second. We also claim, adjusting the said platform or its equivalent, to any required inclination—as described by means of the left and right ssrew shaft G, blocks F F, inclined planes e e, disk H and plates K K, or their equivalents, as described.

FOUNTAIN PEN—Nelson B. Slayton, of Madison, Ind.: I claim, the fountain-pencil, consisting of a tube tapering to a point, and slit from said point some distance up two or more sides; said tube being connected with an ink-reservoir, which is closed except at its connection with said tube, and from which the ink is caused to flow through the said tube and down the slits thereof, and issue from the point thereof, when the said point is moved in contact with a surface of suitable character to receive an inscription in ink, substantially as described.

I also claim regulating the degree of fineness of the writing or marks produced, by means of a screw thread a, and cone b, on the exterior of the tube, and a nut d, carrying a conical cup d', fitted to the said screw thread and cone and acting in opposition to the elasticity of the nibs, g g of the tube—substantially as described.

MACHINERY FOR FILLING SEINE NEEDLES—Simon F. Stanton, of Manchester, N. H., (assignor to himself and I. M. Stanton, of same place): I claim, giving the needles a vibrating motion by devices such as described or their equivalents, in combination with the arm which delivers the twine, vibrated perpendicularly and traversed horizontally, by devices such as described or their equivalents, so as to deliver the twine across the score and around the tongue of the needle, substantially as described.

BILGE AND LEAKAGE WATER INDICATORS FOR VESSELS—Reuben Shaler, of Madison, Conn.: I claim, (in bilge and leakage indicators,) the sectional diaphragm spring C, as arranged in relation to the chamber A, and the standard D, for the purpose described.

APPLE PARERS—Marvin Smith, of New Haven, Conn.: I do not claim the combination in the same machine, as such, of knives of different kinds, and operating in different ways, for the purpose of paring and slicing apples; it having been done many years since.

But I claim, first, the construction of a machine for paring and slicing apples, in such a manner that a vibratory or oscillating motion may be given to the fork carrying the apple, simultaneously with the axial or rotating motion of the same, whereby I am enabled to use a paring knife that shall be automatic or self-acting in its operation, yet equally adapted to paring apples large or small.

Second. I claim the knife m, and handle G, hinged and operating in such a manner that the adjustment of the cutting edge of the knife to the entire surface of the apple, shall be coincident with the vibratory or oscillating motion of the fork carrying the apple.

Third. I claim the pawl H, or its equivalent, hinged at such a point with respect to the oscillating centre of the fork c, that as the said fork is moved in the direction of the hinge of said pawl, the point of contact between the fork c, and the pawl H, shall recede from the oscillating centre of said fork c.

DYNAMOMETER—George & J. W. Gibbs, of Canton, O.: We claim the register or pointed P P, which shows the average or mean draft, in combination with the slot R, and pin S, or its equivalent, which overcomes the vibrating motion of the pointer L, shown on the dial, substantially as set forth.

CUPPING—Loyall Gillotson, of Thompson, Ohio: I wish to be distinctly understood as not claiming the use of a cupping instrument, nor the employment of electricity for the reduction of disease in the human body, separately considered—the use of both, singly, having been long known to the medical profession.

But I claim, the within described apparatus, viz., the spiral wire G, disk H, and loop I, combined and attached to a cupping instrument for the purpose of employing electricity in conjunction with cupping, as an adjuvant for diseased parts of the human body, as set forth.

BALL CASTOR FOR TRUNKS AND FURNITURE—Judson Knight, of Newark, N. J.: I do not claim the separate parts of the castor as my invention. But I claim, the combination of the points a a', and the ball b, working in an open socket c, in the manner and for the purpose substantially as described.

LAMP—Peter C. Guion and Paul K. Wombaugh, (assignors to Paul K. Wombaugh,) of Cincinnati, O.: We claim the elastic bulb or receiver, f, surrounding and communicating at bottom with a hollow stem, b c d, which supports and opens into the bowl, in the described combination with the air duct, g, having an inwardly opening valve, h, affording the described means of communication from the external atmosphere to the upper part of the bulb, or equivalent devices, for the purposes explained.

RE-ISSUE.

BOMB LANCE FOR KILLING WHALES—Christopher C. Beand, of Norwich, Conn. Patented June 22d, 1852: I claim the mode of sustaining the fuse rope in the fuse tube and preventing the fire of the charge of the gun from passing by the fuse rope and into the bomb, viz. by metal or metallic plugs, or the equivalents thereof, cast around or made to closely encompass the fuse rope after it has been inserted in the fuse tube, as specified.

I do not claim the application of wings or feathers to a shaft or rod to direct its passage through the air.

But I claim so making or applying them to the shaft shank or to the body of the bomb, that not only may they be folded or moved down, so as to be capable of entering with the shaft the bore of the gun, but each have an elastic property or spring, such as will cause it to unfold or be thrown outwards, immediately after the projectile may be discharged from the gun, such wings being made of vulcanized india rubber, or any substance or substances which may be deemed an equivalent thereto, inasmuch as such may possess the requisites above specified.

ADDITIONAL IMPROVEMENT.

RAISING AND LOWERING CARRIAGE TOPS—Anson Quigley, of Sheldrake, N. Y. Patent dated April 22d, 1856: I claim the bore, B, pawl or catch, D, in combination.

DESIGNS.

SIX PLATE STOVES—N. S. Vedder and Ezra Ripley, of Troy, N. Y., (assignors to Sweetland & Little, of Crescent, N. Y.)

COOKING STOVES—N. S. Vedder & Wm. L. Sanderson of Troy, N. Y., (assignors to Sweetland & Little, of Crescent, N. Y.)

COOKING STOVES—N. S. Vedder & Wm. L. Sanderson, of Troy, N. Y., (assignors to Sweetland & Little, of Crescent, N. Y.)

This is the last Number of Volume Eleven.

Our friends will please to renew their subscriptions promptly in order to procure the coming volume complete.

We do not employ traveling agents to canvass for us. This system we are obliged to condemn after a fair trial of it. We offer prizes as a stimulant to our friends to enter the field. Remember, we pay One Thousand Dollars cash on the 1st of January next. These are good chances for the employment of leisure hours

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Great Britain, *France*, *Belgium*, *Austria*, *Prussia*, and *Russia*, are all densely populated countries, having large manufacturing mechanical, and agricultural interests. The Editors of the SCIENTIFIC AMERICAN are in weekly correspondence with their agents in Europe, in regard to patents in these countries. They are largely engaged in securing European patents, and will freely consult with those who wish advice upon this subject.

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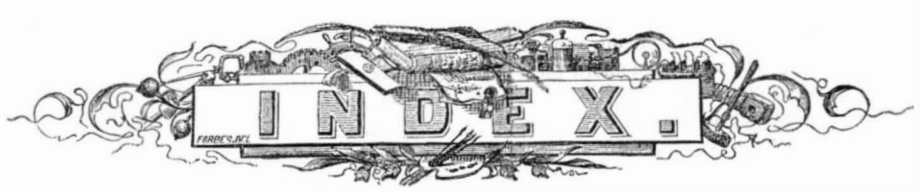
The voluminous Index for the past year, which we herewith publish, together with the ornamental title page for binding with the volume, necessarily occupy a large portion of our space. But next week we commence a New Volume, and the first number will be an unusually valuable one. Let no one fail to renew his subscription promptly, for thus he will be secure against the loss of the first number.



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